BEFORE THE

ORIGINAL

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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In the Matter of	)	
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1998 Biennial Regulatory Review —	)	ET Docket No. 98-42
Amendment of Part 18 of the	)	
Commission's Rules to Update	)	
Regulations for RF Lighting Devices	)	

To: The Commission

REPLY COMMENTS OF MOBILE COMMUNICATIONS HOLDINGS, INC.

Mobile Communications Holdings, Inc. ("MCHI"), by counsel and pursuant to Sections 1.415 and 1.419 of the Commission's Rules (47 C.F.R. §§ 1.415 and 1.419), hereby replies to the initial comments submitted in the above-captioned proceeding.[1/] The Commission proposes as part of its biennial regulatory review process to modify its rules "to reduce unnecessary regulatory burden and to support the introduction of new and beneficial products while ensuring that spectrum-based communications services continue to be protected from interference." *NPRM*, 13 FCC Rcd at 11307 (¶ 1). MCHI submits these comments to urge the Commission to conscientiously pursue the latter objective of

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1/ *See Notice of Proposed Rulemaking*, 13 FCC Rcd 11307 (1998) ("*NPRM*"). Comments were filed in this proceeding on or before July 8, 1998, and Reply Comments were initially due no later than August 7, 1998. However, on August 4, 1998, the Commission released an Order Granting Extension of Time, requested by Fusion Lighting, which established today, August 24, 1998, as the new reply deadline. *See Order Granting Extension of Time*, DA 98-1515, slip op. at 1 (released August 4, 1998).

protecting existing services from harmful interference, particularly mobile-satellite service ("MSS") in the 2483.5-2500 MHz band.

MCHI is a U.S. corporation formed in 1990 for the purpose of designing, developing and implementing a global MSS system. It has been licensed by the Commission to construct, launch and operate the Ellipso® system,[2/] which will operate downlinks in the 2483.5-2500 MHz frequency bands (with uplink transmissions in the 1610-1621.35 MHz bands). The up and down link allocations were granted on a global basis by the ITU's WARC in 1992 largely at U.S. initiative. The U.S. effort was intended to foster U.S. led global sub geo MSS systems. Since then other countries increasingly have been following the FCC's lead in the matter in which the spectrum is segmented and protected. For these reasons, MCHI has a vested interest in maintaining the integrity and utility of these bands for provision of MSS and we believe the U.S., as a matter of policy, does as well.

In the *NPRM*, the Commission raised the issue of potential interference to MSS from new RF lighting devices and invited comments as to whether it would be

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2/ *See Mobile Communications Holdings, Inc.*, DA 97-1367, slip op. (IB/OET, released July 1, 1997). Ellipso® is a patented "Big LEO" MSS system, employing elliptical and equatorial medium-earth orbit satellites, that will offer voice and data telecommunication services to users worldwide beginning in the year 2001.

necessary to establish in-band limits for RF lighting technology to facilitate sharing.[3/] Responding to this query, Fusion Lighting ("Fusion") asserts in Comments that adoption of in-band emissions limits would be inappropriate, and that its equipment will operate in a manner similar to microwave ovens — which are not subject to specific interference limitations.[4/] In support of its position, Fusion cites comments from CC Docket No. 92-166 in which some Big LEO MSS applicants apparently concluded that their operations would not be adversely affected even in urban areas densely populated with microwave ovens and other ISM devices.[5/]

What Fusion ignores in its comments is the fact that the operational conditions for RF lighting devices will be markedly different than for microwave ovens. Most microwave ovens are used only sporadically for brief periods, and are located indoors, typically in residential settings. By contrast, as described in the *NPRM*, RF lighting devices are likely to be utilized outdoors for extended continuous periods for illumination of warehouses, parking lots and shopping malls.[6/] In addition, streets,

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3/ *See NPRM*, 13 FCC Rcd at 11312 (¶ 13).

4/ *See* Comments of Fusion Lighting at 12-15 (filed July 7, 1998) ("Fusion Comments").

5/ *See* Fusion Comments at 12-13.

6/ *See NPRM*, 13 FCC Rcd at 11310 (¶ 8).

highways and airports would also be likely areas for their use.[7/] These are all environments where MSS handsets can be expected to be used extensively. It is thus probable that unchecked emissions from RF lighting would cause harmful interference to MSS systems.

As noted in the comments filed by Satellite CD Radio, Inc., a standard benchmark for evaluating the significance of new emissions for licensed satellite systems is an increase of six percent (6%) or more in the noise floor for an affected system.[8/] MCHI has made a preliminary analysis and has determined that noise levels in the 2483.5-2500 MHz band could be increased significantly above the nominal 6% increase within typical proximities of an RF lighting device of the type proposed by Fusion. This level of interference, even from a single RF lighting device, would be unacceptable, potentially disrupting reliability of MSS communications, even far away from urban areas where traditional ISM devices are less concentrated, but RF lighting may still be widely used, not only with single lamps but with concentrated groupings of such devices.

Given this likelihood of harmful interference, MCHI believes that the Commission should proceed cautiously and should not relax existing technical

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7/ Indeed, in the *NPRM*, the Commission states its expectation that RF lighting devices would be used for street lighting. *See NPRM*, 13 FCC Rcd at 11312 (¶ 13).

8/ *See* Comments of Satellite CD Radio, Inc. at 11 & Technical Analysis at 1 (filed July 8, 1998).

requirements for RF lighting or establish new definitive standards until it can thoroughly study and establish reasonable means for avoiding adverse consequences to existing licensees. While the Commission notes that an international footnote to the Allocations Tables imposes the burden of accepting harmful interference on radio services operating in the ISM bands,[9/] it is also the case that the Radio Regulations require administrations to "take all practicable and necessary steps to ensure that radiation from [ISM equipment] is minimal."[10/] Accordingly, the Commission should adopt standards in this or another proceeding that will minimize in-band emissions from RF lighting equipment in a manner

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9/ *See NPRM*, 13 FCC Rcd at 11312 (¶ 13) & n.15, citing Section 2.106, Footnote 752 of the Commission's Rules. 47 C.F.R. § 2.106 (1997).

10/ ITU Radio Regulation S15.13.

that ensures that MSS systems can continue to operate without disruption in the 2483.5-2500 MHz downlink bands. Microwave lighting equipment should not be authorized unless such standards can be successfully developed.

Respectfully submitted,

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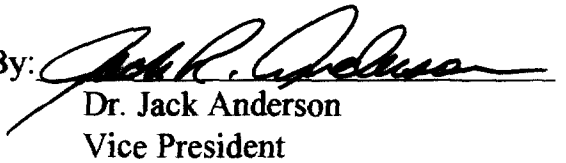
August 24, 1998

TECHNICAL CERTIFICATE

I, Dr. Jack Anderson, hereby certify, under penalty of perjury, that I am the technically qualified person responsible for the preparation of the technical information contained in the foregoing "Reply Comments of Mobile Communications Holdings, Inc.," and that this information is true and accurate to the best of my knowledge and belief.

August 24, 1998

By: 

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